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Eighth progress report on the enterprise resource planning project

Report of the Advisory Committee on Administrative and Budgetary Questions

I. Introduction

1. The Advisory Committee on Administrative and Budgetary Questions has considered the eighth progress report of the Secretary-General on the enterprise resource planning project (A/71/390), submitted pursuant to General Assembly resolution 64/243, in which the Assembly requested the Secretary-General to continue to ensure that the Assembly was kept informed, on an annual basis, of the progress regarding the enterprise resource planning project (Umoja). The Committee also had before it the fifth annual progress report of the Board of Auditors on the implementation of the United Nations enterprise resource planning system (A/71/180), submitted pursuant to Assembly resolution 66/246.

2. During its consideration of the above-mentioned reports, the Advisory Committee met with the representatives of the Secretary-General, who provided additional information and clarification, concluding with written responses received on 3 November 2016. The Committee also had an exchange with the members of the Audit Operations Committee.

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II. Fifth annual progress report of the Board of Auditors on the implementation of the United Nations enterprise resource planning system

3. The Board of Auditors indicates that its report has been prepared on the basis of audit examinations conducted between December 2015 and April 2016 (see para. 4 below). The areas covered by the Board include: progress in deploying Umoja; stabilizing the Umoja solution; delivering the remaining Umoja functionality; supporting the Umoja solution; and the costs and benefits of Umoja. The Advisory Committee's comments on the Board's observations and recommendations are reflected in the context of its discussion on each subject, as relevant, in the paragraphs below. **The Advisory Committee commends the quality of the Board's report.**

III. Eighth progress report of the Secretary-General on the enterprise resource planning project

4. The Secretary-General indicates that his eighth progress report on the status of the implementation of Umoja covers progress made from September 2015 to August 2016. Key issues covered in the report include: project status; preparation for future roll-outs; realization of benefits; mainstreaming, reorganization and reprofiling of resources; risk management; resource requirements; and Umoja operating, maintenance and support costs.

A. Project status

5. The Advisory Committee recalls that the General Assembly, in its resolution 67/246 (sect. III, para. 25), requested the Secretary-General to ensure full implementation of the revised Umoja deployment strategy as proposed in the fourth progress report of the Secretary-General on the implementation of the enterprise resource planning project (A/67/360), and approved the complete implementation of the full scope of the project[1] by December 2018 at the latest, taking into account the comments and recommendations contained in paragraph 53 of the related report of the Advisory Committee (A/67/565). In that resolution (sect. III, para. 26), the Assembly also approved the revised plan of completing by December 2015 the design, build and deployment of Umoja Foundation and Umoja Extension 1. The proposed revised deployment strategy for the Secretariat-wide implementation of Umoja by the end of 2015 was based on a phased approach involving: (a) the design and build of the Umoja solution in three functional groups — Umoja Foundation, Extension 1 and Extension 2; (b) the deployment of Umoja Foundation and

[1] The full scope of the system encompasses a total of 321 processes structured as follows: (a) Umoja Foundation, with 122 processes in the areas of finance, assets, procurement, property, equipment and inventory management to support the automation required for the adoption of the International Public Sector Accounting Standards; (b) Extension 1, with 66 processes for human resources, including payroll, and travel management; and (c) Extension 2, with the remaining 133 processes, including those for budget formulation, supply chain management, grant management and programme management.

Extension 1 functionality in four geographical clusters by the end of 2015; (c) the design of Umoja Extension 2 by the end of 2015; and (d) the completion of the build phase of Extension 2 by the end of 2017 and deployment by the end of 2018. Annexes III and IV of the Advisory Committee's report on the fourth progress report (A/67/565) provide, respectively, details on: (a) the offices, departments, field missions and other entities included in each cluster;[2] and (b) a list of the 321 processes that constitute the full scope grouped as Umoja Foundation, Extension 1 and Extension 2.

6. Table 1 of the report of the Secretary-General (A/71/390) provides a summary of the major Umoja project milestones over the period from July 2013 to December 2018, including completed and ongoing preparatory activities and planned deployments. The key deployments completed to date include the following:

(a) November 2015: Secretariat-wide (clusters 1 to 4) deployment of Umoja Foundation and Umoja Extension 1, identified as Umoja Integration when implemented simultaneously (ibid., paras. 17-19), except for payroll for local staff (cluster 5), which is scheduled for November 2016;

(b) July 2016: Secretariat-wide deployment of a service delivery functionality to streamline cost-recovery activities (ibid., paras. 20-21);

(c) July 2016: implementation of phase 1 of the changes to the International Civil Service Commission (ICSC) compensation package as approved by the General Assembly in its resolution 70/244, including relocation elements and some field allowances and benefits (ibid., paras. 53-54; see also para. 19 below);

(d) August 2016: production of the financial statements for peacekeeping operations, involving deployment of two new SAP[3] modules (A/71/390, paras. 22-26).

7. In addition, the Secretary-General reports the following achievements in the area of business intelligence: (a) development of a business intelligence academy curriculum with the certification of 40 trainers and training of over 375 staff to build capacity for developing reports, dashboards and analytics, as well as functional training in the use of business intelligence; (b) development by the Office of Information and Communications Technology of programmatic donor reporting consolidating Umoja financial information and data from other legacy systems for

[2] Cluster 1: 14 peacekeeping operations, the United Nations Logistics Base at Brindisi, Italy, and the Regional Service Centre at Entebbe, Uganda; (b) cluster 2: 14 special political missions, the United Nations Truce Supervision Organization and the United Nations Military Observer Group in India and Pakistan; (c) cluster 3: the United Nations Office at Nairobi, the United Nations Environment Programme, the United Nations Human Settlements Programme, the Office for the Coordination of Humanitarian Affairs (including United Nations Headquarters and the United Nations Office at Geneva as its service providers) and the Economic and Social Commission for Asia and the Pacific; and (d) cluster 4: United Nations Headquarters, the United Nations Office at Geneva, the United Nations Office at Vienna, the Economic Commission for Africa, the Economic and Social Commission for Western Asia, the Economic Commission for Latin America and the Caribbean, the Economic Commission for Europe, the international tribunals, and deployment of Umoja Extension 1 in peacekeeping operations/special political missions for international staff. Subsequently, cluster 5 was added for the implementation of Umoja Extension 1, including payroll for national staff (see A/70/369).

[3] Refers to the enterprise resource planning software package being implemented at the United Nations.

the United Nations Office on Drugs and Crime, to be replicated for other offices; and (c) coordination of the assignment of business intelligence resources globally by the Office of Information and Communications Technology to meet the growing demand for reports, as part of the mainstreaming of Umoja (see para. 41 below).

8. The report of the Secretary-General states that Umoja is currently supporting more than 400 locations worldwide. The Advisory Committee was informed that, following the deployment of Umoja in cluster 5 entities on 1 November 2016, the system currently had a total of 42,202 users and 37,809 self-service users, was providing payroll services for 47,056 personnel, including uniformed personnel, and was servicing 6,817 consultants and 3,051 individual contractors. The Advisory Committee was also informed that the system was servicing a total of 60,817 meeting participants, including 37,180 meeting participants whose travel had also been processed in Umoja.

9. **The Advisory Committee welcomes the progress reported by the Secretary-General in the deployment of Umoja Foundation and Extension 1 and considers the Secretariat-wide implementation of Umoja to be a major achievement for the United Nations. In the Committee's view, the replacement of a multitude of highly fragmented administrative processes and information systems with a common, integrated enterprise resource planning system that results in streamlined, standardized business processes and a harmonized way of working in an organization as large, complex and geographically dispersed as the United Nations constitutes a consequential business transformation and change in technology. The deployment of such a system provides a platform for making further improvements in the operations of the organization, supporting decision-making, streamlining business processes and increasing transparency on costs and utilization of resources, as well as for enabling further business transformation initiatives, such as the implementation of a new service delivery model. The completion of the deployment of the first two phases of the project, Umoja Foundation and Extension 1, also provides a sense of confidence that the full scope of the project as approved by the General Assembly in its resolution 63/262 can be delivered.**

B. Stabilizing Umoja

10. The Secretary-General indicates that the issues identified by the Umoja post-implementation review task force, which had been revived to resolve the issues raised by cluster 3 and 4 entities, were grouped into a set of 67 recommendations, of which 13 were categorized as continuous improvements to be addressed over time and the rest were targeted for resolution and closure by the end of 2016. The recommendations were grouped by functional area, as shown in figure I of the report of the Secretary-General, and assigned to process owners and the Chief Information Technology Officer, with target resolution dates. Further details on the work of the task force and the recommendations issued are provided in paragraphs 30 to 35 of the report of the Secretary-General. **The Advisory Committee trusts that the Secretary-General will ensure that the outstanding issues are resolved by the end of 2016, as planned.**

11. In its report (A/71/180), the Board of Auditors notes that, although problems with the deployment of Umoja in clusters 3 and 4 were expected, and mitigation measures were put in place, the scale of problems reported in 2015 exceeded the capacity of the support network and the Umoja team to respond. The Board found that users were inadequately trained prior to the deployment of Umoja and that, in a post-deployment survey of cluster 3 and 4 users, almost 50 per cent of the respondents considered themselves unprepared for the deployment of Umoja. The Board notes that, by March 2016, all of the Umoja team's software business analysis capacity (64 staff) had been dedicated to post-deployment support, with an additional 14 consultants being contracted to provide temporary assistance. However, a shortfall of business analysis skills in key areas, including financial accounting, funds management, travel and payroll, hampered the Administration's ability to understand and resolve problems promptly. The Board also notes that weaknesses in business reporting functionality were identified as a critical issue by cluster 3 and 4 entities. The Board's report provides further details on the difficulties encountered in the post-implementation period at cluster 3 and cluster 4 entities and the impact on day-to-day operations (see A/71/180, summary, paras. 8-10; paras. 29-50).

12. In this connection, the Advisory Committee recalls that the Board of Auditors has on numerous occasions highlighted the importance of achieving organizational and business readiness for Umoja, introducing change to the United Nations in an effective, planned manner, and developing adequate contingency plans to mitigate known risks (see A/68/151, A/69/158 and A/70/158). The Board also pointed to the ambitious planning assumptions for the project and its aggressive implementation timetable, in particular for clusters 3 and 4, which resulted in some key project activities, such as training, being curtailed.

13. **The Advisory Committee observes that, as a result of the serious issues that emerged in the aftermath of each of the major Umoja deployments and the extent of the efforts required by the Umoja team to support post-deployment stabilization and resolve organizational preparedness issues, the project timetable has had to be revised multiple times, entailing delays in the preparations for new deployments with cost implications and an impact on the overall level of the approved budget. The Advisory Committee stresses the importance of ensuring that lessons learned from previous deployments continue to be drawn and are fully taken into account in preparing future roll-outs in order to ensure smoother deployments and avoid extensive stabilization efforts resulting in delays, cost escalation and other risks.**

14. Upon request for further information on the Board's findings regarding the lack of sufficient high-quality training prior to deployment, the Advisory Committee was informed that the Secretariat had indeed faced a formidable challenge in the area of training. A train-the-trainers approach had been adopted in order to maximize training resources, complemented by additional approaches based on lessons learned after each deployment, including distance learning and enhanced content and quantity of job aids and documentation available online. The Secretariat also acknowledged that the aggressive deployment schedule between the deployments of clusters 3 and 4, which were also the largest and most complex clusters, did not allow for a comprehensive revision of the training plan and its content, as a result of which some training material developed for the earlier

peacekeeping deployment (cluster 1) could not be adapted to a non-peacekeeping context (clusters 3 and 4). Other factors contributing to training-related challenges included: (a) correct identification of the users to be trained by the deploying entities owing to a lack of understanding of changed roles and responsibilities; (b) shortage of qualified Umoja trainers; and (c) movements of trained staff. The Committee was also informed that the lessons learned from cluster 3 had contributed to reinforcing training efforts for cluster 4 and that the insufficiencies in predeployment training had been compensated for by putting into place strong support centres equipped to assist staff and provide hands-on training during the ramp-up period. Furthermore, global training efforts had continued beyond deployment.

15. The Advisory Committee was informed that the Umoja team's training strategy had continued to address the most significant challenges experienced prior to cluster 4, by building greater capacity for sustaining training commensurate with needs, and to provide the tools for assessing training needs with regard to the proper use of Umoja. These efforts included: (a) availability of Umoja learning methods based on a range of modalities;[4] (b) establishment of a trained global network of Umoja training coordinators and local process expert trainers; (c) gradual expansion of the wider pool of business process experts across the Organization; and (d) creation of a network of experts who can function in global cross-functional teams and address global issues. The Committee was also informed that, since 2013, over 17,500 staff members had completed one or more instructor-led training courses and some 25,580 staff members had completed one or more self-enrolled computer-based training courses.

16. **The Advisory Committee notes the efforts being made to improve Umoja training and encourages the Secretary-General to continue to strengthen in-house capacity and expertise on Umoja.**

C. Upcoming roll-outs

17. The future roll-outs of Umoja include: (a) the deployment of Umoja Extension 1 in cluster 5 entities; (b) the introduction of adjustments to Umoja pursuant to General Assembly resolution 70/244 on the recommendations of ICSC regarding the changes to the ICSC compensation package for staff in the Professional and higher categories; and (c) Umoja Extension 2 (see sect. III.D below).

18. Information on the deployment of Umoja to cluster 5 entities is provided in paragraphs 49 to 52 of the report of the Secretary-General. As indicated, cluster 5 involves the deployment of Umoja Extension 1 for more than 11,600 national staff and 8,700 individual uniformed personnel in 38 peacekeeping and special political missions. The report indicates that the deployment of Umoja to cluster 5 entities, originally planned for April 2016, was subsequently postponed to September 2016 and was on track for implementation in November 2016.[5] Explanations regarding

[4] Computer-based, instructor-led (face-to-face), blended learning (distance learning), including self-paced and virtual classrooms, outreach programmes, knowledge transfer workshops, user guides, job aids, simulations and fact sheets.

[5] The Advisory Committee was informed that cluster 5 had been effectively deployed in November 2016, as planned.

the delays experienced in deploying cluster 5 are provided in paragraph 50 of the report. The report also indicates that, although no new functionality is being deployed, the implementation to cluster 5 entities is challenging owing to the significant data cleansing and enrichment to be undertaken in several legacy systems, as well as the extensive change management activities needed, both at Headquarters and in field duty stations.

19. With regard to the changes related to the ICSC compensation package, the report of the Secretary-General indicates that the changes are to be deployed in four phases: the first was implemented on 1 July 2016, the second was scheduled for 1 November 2016,[9] the third, which comprises all changes mandated by the General Assembly effective 1 January 2017, is scheduled for implementation on 1 September 2017, and the fourth is scheduled for 1 January 2018 (A/71/390, paras. 53-54). The Secretary-General's detailed proposals in this regard were presented in a note submitted for consideration by the General Assembly at its seventieth session (A/70/896 and Corr.1; see also the related report of the Advisory Committee (A/70/961)). In his note, the Secretary-General proposed that changes to the compensation package relating to phase 2 would come into effect on 1 November 2016 instead of on 1 July 2016 and that those related to phase 3 would come into effect on 1 September 2017 instead of on 1 January 2017, owing to technical and operational challenges faced by the Secretariat causing delays in the implementation of the new compensation package. However, at the time of the introduction of the above-mentioned note to the General Assembly on 11 October 2016, the Secretary-General informed the Assembly that he would be able to proceed with the implementation of all the changes on the dates mandated by the Assembly. **The Advisory Committee expects the Secretary-General to formally revise his eighth progress report on the implementation of Umoja to reflect the observance of the original timetable approved by the General Assembly related to the implementation of the ICSC compensation package (see A/71/557, paras. 131-137). Furthermore, while noting that the related changes to Umoja and the development costs are being implemented as part of the Umoja project (A/71/390, para. 158), the Advisory Committee emphasizes that, in the future, such changes should be implemented and funded as part of the normal operations of the Organization.**

20. **The Advisory Committee expects that organizational readiness and adequate training are ensured prior to the above-mentioned deployments so as to ensure a successful transition to the new system in a manner that avoids a lengthy stabilization period (see para. 13 above).**

D. Umoja Extension 2

21. The report of the Secretary-General outlines the schedule and workplan for implementing the full scope of Umoja by December 2018 (A/71/390, paras. 55-98). In his report, the Secretary-General states that the 133 Umoja Extension 2 processes have been grouped logically into seven separate projects to be implemented according to the schedule depicted in figure III of the report. The Secretary-General

[9] The Advisory Committee was informed that the second phase had been effectively implemented in November 2016, as planned.

indicates that, with the completion of the implementation of Umoja Extension 2 by December 2018, the full scope of Umoja, as decided by the General Assembly, will be achieved. The Extension 2 projects address functionalities for: budget formulation; supply chain management; fundraising and donor relationship management; implementing partners; conference and event management; force management; and other projects. A summary of the seven Umoja Extension 2 projects is provided in the paragraphs below. For ease of reference, the Umoja schedule, as summarized in figure III of the report of the Secretary-General, is reproduced in the annex to the present report.

Budget formulation

22. The report of the Secretary-General (ibid., paras. 59-65) indicates that the functions covered under the proposed budget formulation project include:

(a) Budget life cycle, including the formulation of initial guidance, resource planning, legislative and governing bodies' review and approval, and performance reporting to governing bodies, donors and other stakeholders;

(b) Standard costing and recosting of parameters, including price inflation and exchange rate movements;

(c) Sensitivity analysis and modelling of resource requirements for the delivery of programmes and mandates using alternative funding levels, including costing of the decisions of legislative and governing bodies;

(d) Programme and project management, including the development of detailed plans with results-based management frameworks and expected accomplishments and indicators of achievement; monitoring and evaluation; ongoing appraisal of programme activities; evaluation of the delivery of outputs and their contribution to the expected accomplishments; cost forecasting and reporting; performance reporting; programme completion and closure; and return of unused funds;

(e) Force management,[7] including resource planning for the start-up, adjustment, downsizing or liquidation of a mission.

23. The Secretary-General indicates that a limited proof of concept exercise is being conducted in October 2016 to validate critical assumptions about the software capabilities, which will be followed by the development of multiple prototypes and a comprehensive proof of concept in August 2017. Upon enquiry, the Advisory Committee was informed that a proof of concept exercise was in progress and scheduled for completion on 9 December 2016. The delay was due to the need to postpone the exercise owing to the non-availability of SAP trainers who would provide the prerequisite training to participants. The deployment of the budget formulation project is planned for the third quarter of 2018, concurrently with the

[7] According to the definition provided by the Secretariat, force management is a broad term that includes the following processes related to the lifecycle of a peacekeeping mission, from the initial planning to its final downsizing and liquidation: "plan to mandate"; "mandate to mission"; and downsizing and liquidation. The latter two are, for the most part, covered by the budget formulation project. Force planning, which involves determining the troop strength, among other things, is the part that is expected to address pre-Security Council approval.

submissions for the 2019/20 peacekeeping budgets and the proposed programme budget for the biennium 2020-2021 (see annex to the present report).

Supply chain management

24. The report of the Secretary-General (A/71/390, paras. 66-77) indicates that the proposed supply chain management project would comprise three phases, as follows:

(a) *Phase 1: Galileo decommissioning and inbound/outbound processing*. The report of the Secretary-General (ibid., paras. 69-71) indicates that this phase involves replacement of the Galileo system in field missions for managing plant, equipment and machinery, with enhanced functionality to meet the requirements of field missions in areas such as integrated physical inventory verification and fleet equipment management. It is also indicated that this phase will require substantial cleansing and enriching of Galileo data, planned to be undertaken centrally in Brindisi, in coordination with field missions, which will also bear the related costs. In addition, prior to deployment, Umoja supply chain management will have to be enhanced to fully cover Galileo functionality. The Secretary-General indicates that the design of the Umoja enhancements has been completed and that preparations are under way for the build phase. The decommissioning of the Galileo system is planned for September 2017;

(b) *Phase 2: demand and supply planning*. The report of the Secretary-General (ibid., paras. 72-74) indicates that demand planning covers advance planning capabilities for the production of operational forecasts of acquisition plans for materials and services as well as statistical demand forecasting based on historical consumption trends. Supply planning includes the preparation of operational-level plans to source and deliver goods and services at the right time and at optimized cost, as well as life cycle management, including transportation, export/import requirements and verification of shipping information. This phase uses the SAP Advanced Planning and Optimization software, which requires that staff receive training in advanced supply chain planning methodologies as well as in the use and configuration of the new software. Work on this phase is scheduled to commence in the fourth quarter of 2016, prior to the completion of the first phase of the supply chain management project, and will require the appropriate management of resources to ensure the availability of the skilled resources necessary during each phase. The deployment of demand and supply planning is planned for the third quarter of 2018;

(c) *Phase 3: long-term capabilities planning*. The report of the Secretary-General (ibid., paras. 76-77) indicates that this phase focuses on leveraging analytical information to perform strategic or long-term demand and supply planning, in consultation with programme management and strategic sourcing. Preparatory activities are planned to start in the first quarter of 2018, with deployment of the solution at the end of 2018 (see annex to the present report).

Fundraising and donor relationship management

25. The report of the Secretary-General (A/71/390, paras. 78-80) indicates that this project would cover: (a) the appeals for funds and the relationships with donors; and (b) programme budget formulation content for both fundraising and donor

reporting, as well as improve forecasts of funds and cash flow. The initial phase of the project, prior to the design and build of the solution, involves harmonizing business requirements related to fundraising and donor relationships. The preparatory work on this project is planned to start in the first quarter of 2017, with deployment of the solution in the fourth quarter of 2018 (see annex to the present report).

Implementing partners

26. The report of the Secretary-General (A/71/390, paras. 81-83) indicates that, in addition to the grant management functionality already deployed as part of Umoja Foundation for managing interactions with implementing partners regarding the delivery of programmes and projects funded by voluntary contributions, the implementing partners project will provide a portal and tools for the partners to request funds, record progress of implementation and submit other performance details. The project is scheduled to start in the fourth quarter of 2017, when it is expected that the process experts involved in the programme planning and reporting aspects of the budget formulation project that are also required for the implementing partners project will become available. The project will focus initially on implementing partners from the United Nations system and pilot a small number of non-United Nations implementing partners. The deployment of the solution is planned for the fourth quarter of 2018 (see annex to the present report).

Conference and event management

27. The report of the Secretary-General (A/71/390, paras. 84-88) indicates that conference and event management under Umoja will comprise three main components: (a) event planning, which comprises planning and management of the calendar for official conferences and meetings, non-calendar conferences and meetings, off-site conferences and meetings, and special events; (b) event implementation, which covers a range of processes, from the creation of master data and management of participants to event execution and follow-up; and (c) document production and distribution, which comprises the planning and management of document services in print and other media, including resource allocation and billing for those services. The report indicates that the project will build on existing systems (such as iNeed and eMeets) and the currently deployed Umoja functionality. The project is planned to be implemented in two phases, with preparatory work commencing in the fourth quarter of 2016, and completion of the first phase in the third quarter of 2017 and of the second phase by the third quarter of 2018 (see annex to the present report).

Force management

28. The report of the Secretary-General (A/71/390, paras. 89-92) indicates that Umoja force management (see para. 22 above) is closely linked to the Umoja budget formulation project and has three main components: (a) "plan to mandate", the development of a plan for a new mission or for adapting an existing mission using system-generated templates; (b) "mandate to mission", which involves adjusting plans on the basis of mandate approval by the Security Council, which is covered under the Umoja budget formulation project; and (c) downsizing and liquidation, which is also covered under the Umoja budget formulation project. The preparatory

tasks are scheduled to start in the first quarter of 2018, with deployment at the end of 2018 (see annex to the present report).

Other Extension 2 projects

29. The report of the Secretary-General (A/71/390, paras. 93-98) identifies the following projects that are related to Umoja Extension 2 processes and involve incremental updates to existing functionality or integrating current Umoja functionality with other systems: (a) reimbursements to troop- and police-contributing countries for personnel and contingent-owned equipment, which will cover the life cycle of reimbursements to troop- and police-contributing countries, either by adding the required functionality in Umoja or by integrating Umoja with the existing systems; (b) the Member States' portal for the status of contributions, which is to be replaced by Umoja; and (c) requests for services such as information and communications technology services and facilities and transport planning, many of which are currently provided through the iNeed system, which will require integration with Umoja to provide the inventory management, costing and billing functionalities not covered in iNeed. The report of the Secretary-General indicates that the above-mentioned projects will be designed, built and deployed during 2017 and 2018 (see annex to the present report).

Comments and observations on the proposed implementation of Umoja Extension 2

30. In its past reports, the Advisory Committee has consistently expressed its view that it is in the best interest of the Organization that the full scope of the Umoja project be delivered, as approved by the General Assembly in its resolution 63/262. The Committee has noted that Umoja Foundation and Extension 1 involve mainly transactional functions and those related to the International Public Sector Accounting Standards, which were previously covered by the Integrated Management Information System (IMIS), Galileo and a multitude of other stand-alone systems. The Committee has also pointed out that Umoja Extension 2 comprises some of the more strategic functions, including planning and programming, supply chain management and budget formulation functions, and that the poor coverage of such functions under existing systems was one of the main factors leading to the Assembly's decision to shift to an enterprise resource planning system (see resolution 63/262). The Committee has stressed that the full implementation of the project is necessary to protect the considerable investment already made by Member States, as well as to realize the full benefits of the project. **In view of the above, the Advisory Committee welcomes the Secretary-General's efforts to present a proposal for the implementation of all the remaining Umoja Extension 2 functions/processes, thereby responding to the request of the General Assembly that the full scope of Umoja as initially proposed be implemented by the end of 2018 (see para. 5 above). The Advisory Committee recommends that the implementation of Umoja Extension 2 proceed according to the plan proposed by the Secretary-General.**

31. From figure III of the report of the Secretary-General, the Advisory Committee notes that the proposed schedule for the implementation of Umoja Extension 2 includes the implementation of seven projects involving multiple activities to be carried out in parallel, which are interdependent and often require the availability of

the same skilled personnel at specific stages of each project. **The Committee stresses that the successful implementation of Umoja Extension 2 and the related seven projects described above will require strong management of the project and of staffing resources and proactive measures to address all challenges and risks inherent to the tight implementation schedule, so as to avoid slippages and delays and ensure that the project remains on track. The Advisory Committee reiterates the importance of ensuring that all the lessons learned from previous deployments, including those regarding organizational readiness, are fully drawn and incorporated into project planning and management.**

E. SAP upgrade

32. The report of the Secretary-General indicates that a software upgrade for Umoja has to be implemented by 2020 in order to ensure continued support for the system by the software vendor. Upon request for clarification regarding the timing of the upgrade, the Advisory Committee was informed that there existed certain dependencies between the different phases of the supply chain management project and the SAP software upgrade, which must be implemented after deployment of phase 1 of the supply chain management project and decommissioning of Galileo and before the build and testing of phase 2, which requires the upgraded SAP software. **The Advisory Committee reiterates the need for strong project planning and management in order to ensure proper sequencing of operations without disruption and delays (see para. 31 above).**

F. Improvements to Umoja Integration

33. The report of the Secretary-General indicates that this project covers the improvements identified by the post-implementation task force, which are to be implemented in 2016 and 2017. These include, for instance, the bulk extension of staff contracts and updating of reference tables, as well as the simplification of travel management, all of which could potentially greatly reduce manual effort and errors. **The Advisory Committee trusts that the implementation of improvements with the greatest potential for benefits will be prioritized and that the Secretary-General will report on the progress achieved in his next progress report.**

G. Realization of benefits

34. Information on the realization of benefits is provided in paragraphs 103 to 134 of the report of the Secretary-General. It is indicated that, in response to the recommendations of the Board of Auditors in its fourth and fifth annual progress reports on the implementation of Umoja (see A/70/158 and A/71/180, respectively), the benefits targets have been reviewed on the basis of experiences gained in using Umoja and process owners have reviewed areas previously identified as well as new areas of potential impact. In addition, the report indicates that the modified approach links qualitative benefits to possible quantitative benefits. Furthermore, the assessment of quantitative benefits factors in, where possible, comparisons of

pre- and post-implementation volumes of transactions, the quantitative benefits already achieved, eliminated processes and the redistribution of work among locations, as well as the fact that quantitative benefits will be fully realized only after the full deployment and stabilization of the system, which can take up to one year after complete implementation. The report also indicates that the estimation of quantitative benefits avoids double counting of any potential benefits that could be achieved through the consolidation of administrative services under the global service delivery model (see A/71/417 and the related report of the Advisory Committee).

35. The report of the Secretary-General provides details on qualitative benefits that have been achieved in the areas of human resources, finance, central support services, supply chain and logistics, technology and data management. As regards quantitative benefits, the Secretary-General reaffirms his commitment to delivering overall quantitative benefits totalling between $140 million and $220 million by 2019. Table 2 of the report of the Secretary-General provides a breakdown of those benefits between the regular budget and the peacekeeping and support account budgets, by financial period.

36. The Board of Auditors is of the view, however, that these estimates are based on an assessment of potential benefits undertaken in 2009 and 2011 and do not reflect what the project might realistically deliver in the current circumstances (A/71/180, paras. 98-104). The Board notes that a firm budget reduction target was agreed centrally and that departments were then asked to identify how they could each contribute to achieving that cost reduction target, including opportunities for budget reductions arising from frozen posts, abolished posts and non-post reductions. The Board points out that the lack of baseline performance data increases the risk that reductions have been agreed on the basis of departments' willingness to absorb reductions, rather than on the potential reduction achievable. While noting that the Board's audit was completed some months prior to the issuance of the report of the Secretary-General, during its exchange with the Board, the Advisory Committee was informed that the Board considered that little progress had been made against the recommendations issued in paragraphs 16 and 26 of its second annual progress report (A/68/151). The Board also recalled its earlier conclusion that the original benefits case was built using industry benchmarks, based on a number of assumptions that might or might not hold true in the United Nations context. While acknowledging that this was a reasonable approach at the time, the Board indicated that the business case needed to be revisited as part of the implementation phase of the project. The Board also indicated that there was little evidence that the Secretariat had a stronger basis for the figures contained in table 2 of the report of the Secretary-General. The Board recommends that the Umoja business case be refreshed (see A/70/158, summary, para. 19 (f), and A/71/180, para. 100). **The Advisory Committee concurs with the Board of Auditors in this regard.**

37. **The Advisory Committee emphasizes the need for a more robust business case for the Umoja project, which represents one of the largest and highest-value business transformation initiatives undertaken by the Organization. In the Committee's view, such a business case should reflect actual efficiencies and benefits achieved through the implementation of the solution rather than artificial budget reduction targets, and should also provide clarity on the benefits as well as the costs of the project (see sect. III.I below). In view of the**

foregoing, the Advisory Committee recommends that the Secretary-General be requested to refresh the business case for the Umoja project, taking into account all the relevant recommendations of the Board of Auditors. The Secretary-General should also be requested to ensure that realistic benefit realizations plans are developed for implementing entities, with details on both qualitative and quantitative benefits.

H. Mainstreaming, reorganization and reprofiling of resources

38. Information on the mainstreaming, reorganization and reprofiling of resources is provided in paragraphs 135 to 151 of the report of the Secretary-General. The report highlights the criticality of reorganizing and restructuring the project's resources to address key staffing issues that could have an impact on the successful implementation of the workplan from 2016 to 2019. The Secretary-General indicates that the project team will be gradually downsized and eventually mainstreamed, predominantly into the Office of Information and Communications Technology and partly into other business areas. In this regard, the Advisory Committee recalls that the General Assembly, in its resolution 70/248 A, authorized the Secretary-General, as an exceptional, temporary measure, to postpone the downsizing of the Umoja project team until 31 December 2016 (see A/70/7/Add.19, para. 45).

39. Table 3 of the report of the Secretary-General provides a summary of the authorized posts and the status of post incumbency and vacancies as at 31 August 2016, which shows that: (a) of the 90 posts approved for the Umoja project, 77 were encumbered, 3 were under recruitment, 5 were blocked for staff on assignment and 5 were frozen (permanently vacant) in anticipation of the downsizing of the project; (b) in 2017, a net number of 78 posts is proposed, reflecting the abolishment of 21 posts (3 D-1, 4 P-5, 10 P-4, 4 General Service) and establishment of 9 new posts (3 P-4, 2 P-2, 4 General Service (Principal level)); (c) in 2018, a further reduction to 74 posts is proposed, with 6 posts (3 P-5, 3 P-4) proposed for abolishment and 2 new posts (P-2) proposed for establishment; and (d) in 2019, a further reduction of 14 posts is proposed (1 Assistant Secretary-General, 2 D-1, 3 P-5, 4 P-4, 4 General Service), resulting in a total of 60 posts. Upon enquiry, the Advisory Committee was informed that, of the five posts blocked for staff on assignment, three were proposed for abolishment from 1 January 2017, as reflected in table 4 of the report of the Secretary-General. Of the remaining two posts, one General Service staff member had returned to her post and one staff member at the P-5 level was scheduled to return in July 2018. As indicated in paragraph 139 of the report, this would allow the reorganization of functions and reprofiling of resources to address the requirements of Extension 2 projects at the same time as the downsizing of the team. Since the issuance of the report, further posts have been blocked for assignment, some of which had been proposed for abolishment and others for reprofiling of functions.

40. The organizational structure and distribution of the 78 posts proposed in 2017 is illustrated in the annex to the report of the Secretary-General. The Secretary-General proposes to reorganize staff and contractors around a smaller number of integrated teams to achieve greater consolidation and integration across business and technical functions. In addition, starting in 2017, eight posts (5 P-5 and 3 P-4) are to be reassigned to business areas and to the Office of Information and

Communications Technology to build capacity for mainstreaming and to sustain support for Umoja.

41. The Secretary-General also provides information on the tasks already mainstreamed or in the process of being mainstreamed to the Office of Information and Communications Technology. These include the following: (a) responsibility for the entire infrastructure for Umoja, including services contracted to third-party vendors; (b) coordination of global business intelligence resources; (c) coordination of production support; and (d) integration of all Umoja training courses into the Inspira learning management system with collaboration among the Office of Information and Communications Technology, the Office of Human Resources Management and the Umoja team. Additional functions to be transferred to the Office of Information and Communications Technology include: user access provisioning; the migration of software code changes from development to production; and the maintenance of the Umoja training system.

42. **The Advisory Committee welcomes the Secretary-General's proposals for restructuring and gradual downsizing of the Umoja project team, as well as the mainstreaming of Umoja functions to the Office of Information and Communications Technology. It is of the view that the proposed changes, including the proposed reduction in the number of senior-level posts offset in part by the proposed establishment of junior-level posts, as well as the creation of a small number of teams integrating staff and contractual personnel, represent a positive approach, which will result in a less top-heavy post structure, support the transfer of knowledge from consultants to staff and better align the resources of the project to the requirements of the project activities to be completed in 2017. The Advisory Committee continues to stress the importance of ensuring the transfer of knowledge from consultants to staff in order to reduce dependency on, as well as resource requirements for, contractual services, which represent a large proportion of project costs.**

I. Project costs

43. The Advisory Committee recalls that the General Assembly has repeatedly reiterated its request that the Secretary-General maintain a detailed accounting of indirect costs, including those related to preparatory activities, and provide fully transparent information on those costs in his progress reports. The Assembly has also reiterated its request to the Secretary-General to absorb the indirect costs within the approved budget of each department.[8] In its report (A/71/180), the Board of Auditors notes that the Secretariat does not have a clear understanding of the indirect costs absorbed by business units for such activities as data cleansing, training and user testing and that such costs have been borne within existing departmental budgets since the biennium 2014-2015.

44. **The Advisory Committee is disappointed that little progress has been made thus far to respond to the requests of the General Assembly and maintain a detailed accounting of the indirect costs absorbed by departments, or to conduct an analysis of the total cost of ownership of the Umoja project. The**

[8] See General Assembly resolutions 66/263, 67/246, 68/248 A to C, 69/274 A and 70/248 A.

Committee is of the view that the lack of information on the effective implementation costs of the project reflects weakness in the governance of the project and may have an impact on informed decision-making by the General Assembly. While recognizing that detailed information on all such costs may not have been captured at the start of the implementation of Umoja owing to the limitations of previous information systems such as IMIS, it considers that greater efforts could have been made to estimate such costs. Moreover, the deployment of Umoja should alleviate technical constraints related to the legacy systems, which have largely been replaced, Secretariat-wide.

45. The Board of Auditors also highlights the need for estimating the long-term support costs and total cost of ownership, in which all the lifetime costs that follow from owning assets such as Umoja are identified, including purchase and development costs, as well as the costs for installing, deploying, operating, upgrading and maintaining the system over time. The Advisory Committee recalls that it also recommended that the Secretary-General be requested to complete the analysis of the total cost of ownership of Umoja and to report thereon to the General Assembly (see A/66/7/Add.1 and A/68/7/Add.7). **The Advisory Committee continues to believe that the total cost of ownership of the system is a key input for informed decision-making on investments and reiterates its earlier recommendations.**

46. With regard to project expenditures, the Board of Auditors recognizes that the Umoja team has continued to improve the monitoring of costs and has developed tools to track and report spending against Umoja statements of work, supplier contracts and purchase orders and report on budget consumed and budget committed. The Board notes, however, that the tool reflects the consumption of resources, rather than the achievement of project deliverables, and that there are no clear links between cost and progress. **While noting the limitations of the tools and methodology used, the Advisory Committee considers that, based on the available information, further efforts should be made to conduct a more refined analysis of project expenditures and project deliverables on an annual basis since the inception of the project in 2008, with a view to linking the budget to the project milestones. Such an analysis should include details on the breakdown of the costs of contractual services and all other categories of expenditure and aim to provide the General Assembly with improved information on how the resources approved for the project have been used, including those resources that did not result in the realization of any project deliverables.**

J. Umoja operating, maintenance and support costs

47. Information on Umoja operating, maintenance and support costs is provided in paragraph 184 of the report of the Secretary-General. He indicates that the project budget does not include post-deployment operating, maintenance and support costs, such as the requirements for production hardware, software licence maintenance, hosting services, telecommunications and technical support, which are recurring business operating costs and therefore included in the budgets of the Office of Information and Communications Technology and peacekeeping operations. As

indicated by the Secretary-General, the requirements for the biennium 2018-2019 are reflected in the report of the Secretary-General on the status of implementation of the information and communications technology strategy for the United Nations (A/71/400) and are included in the proposed budget outline for the biennium 2018-2019. **Regardless of where such costs are budgeted, the Advisory Committee stresses that such costs should be included and transparently reflected in the analysis of the total costs of ownership (see para. 45 above).**

K. Resource requirements

48. Table 5 of the report of the Secretary-General (A/71/390) presents a summary of the expenditures for the biennium 2014-2015, which shows that actual requirements amounted to $111,518,500, reflecting a decrease of $17,867,500 compared with the proposed resources of $129,386,000. The Secretary-General indicates that the unused funds for the biennium 2014-2015 are due to the postponement of several activities related to Umoja Extension 2.

49. The revised estimated requirements for 2016-2017 (ibid., table 6) amount to $98,970,600, representing an increase of $44,678,900 over the projected requirements of $54,291,700. Taking into account the unused funds for the biennium 2014-2015 ($17,867,500), the net additional requirements for 2016-2017 amount to $26,811,400. Upon enquiry, the Advisory Committee was provided with additional information on the proposed requirements by object of expenditure as follows:

(a) Posts and other staff costs: the proposed resources for posts, estimated at $28,045,000 in 2016-2017, are to provide for salary and common staff costs for 90 posts during 2016 and 78 posts (1 Assistant Secretary-General, 1 D-2, 4 D-1, 17 P-5, 27 P-4, 12 P-3, 3 P-2, 5 General Service (Principal level) and 8 General Service (Other level)) during 2017. The proposed requirements for other staff costs in 2016-2017, estimated at $14,897,600, will provide for 41 temporary positions in 2016 and 40 in 2017, which are required for a mix of staff hired for their specialized expertise through secondments from other United Nations organizations or external recruitment, and business experts from various departments and offices;

(b) Contractual resources: the proposed resources for contractual resources, estimated at $47.5 million for 2016-2017, are to provide mainly for: (i) the services of the software vendor for enhanced support, including expedited escalation for critical incidents, access to experts for advice in any SAP area and assurance services; and (ii) the services of the systems integrator, which include a combination of offshore resources for activities such as software build activities, fixing software bugs and data-related issues, as well as onshore resources for senior functional specialists, senior specialists for cross-functional areas and solution architects covering different disciplines. The Committee was informed that, for Extension 2 projects, efforts to contain costs included reducing, to the extent possible, demand for costly onshore resources during implementation and for transfer of knowledge purposes by using offshore resources wherever possible and by training project staff as far as possible in advance of the design and build phases;

(c) Travel: the proposed resources for travel are estimated at $1,250,000 for 2016-2017, reflecting an anticipated reduction of $1,157,200 (48.1 per cent)

compared with $2,407,200 in 2014-2015, owing to reduced requirements for the travel of process experts for data conversion efforts and ramp-up activities in preparation for deployment;

(d) General operating expenses: the proposed resources for general operating expenses are estimated at $4,940,000 for 2016-2017, reflecting a reduction of $368,500 (6.9 per cent) compared with $5,308,500 in 2014-2015, and are to provide for office rent ($4,390,000), service-level agreements covering office automation equipment ($220,000) and communications ($330,000);

(e) Furniture and equipment: the proposed resources for furniture and equipment are estimated at $1,288,400 for 2016-2017, reflecting a reduction of $2,405,600 (65 per cent) compared with $3,694,000 in 2014-2015, and are to provide for the replacement of office equipment, including about 60 computers each year, docking stations and printers ($588,400) and a provision for licensing and software requirements ($700,000), including for a mobile solution platform.

50. A summary of the overall project costs since inception in 2008 is provided in table 7 of the report of the Secretary-General. As indicated, the total approved resources for the project amount to $439,352,000, actual expenditure for the period 2008-2015 totalled $367,192,800, and the revised requirements for 2016-2017 are estimated at $98,970,600, bringing the total requirements of the project at the end of 2017 to $466,163,400, which represents an increase of $26,811,400 over the approved budget ($439,352,000).

51. The projected resource requirements for 2018-2019 (ibid., table 8) are estimated at $77,800,000, comprising $45,900,000 for 2018 and $31,900,000 for 2019. The projected total resource requirements for the Umoja project, as summarized in table 9 of the report of the Secretary-General, would rise to $543,963,400.

52. Upon enquiry, the Advisory Committee was provided with additional information on project expenditures as at 1 November 2016, remaining resources and projected monthly expenditures. The information provided indicated that the project resources available as at 1 November 2016, without any further increase, would be sufficient to cover the requirements for the obligations for contractual services for 2017, which are to be obligated in late 2016, the obligations for rent, service-level agreements and licences for 2017, which are to be obligated in January 2017, and the running monthly costs of the project up to February 2017.

53. The Advisory Committee recalls that the General Assembly, in its resolution 70/248 A, requested the Secretary-General to make every effort to eliminate cost overruns through efficiency measures and sound project management and to avoid any further upward revision of the budget during the remaining project schedule, up to the time at which Umoja was fully deployed. **The Advisory Committee is disappointed that despite the efforts made (see paras. 42 and 49 (b) above), further increases to the project budget could not be avoided.**

54. **The Advisory Committee notes that the Secretary-General's proposed resources, which would bring the overall project budget since its inception in 2008 to the end of 2018-2019 to a total amount of $543,963,400, would represent an increase of $104,611,400 or 23.8 per cent over the approved budget of $439,352,000. The Advisory Committee is concerned that the Secretary-General**

is proposing another substantial increase in the project budget while there is insufficient transparency on the total project costs and that the business case for the project has not been updated to reflect the actual efficiencies and benefits achieved through the implementation of the solution. While it strongly believes and recommends that the full scope of the project as proposed in the report of the Secretary-General should be implemented according to the schedule proposed in figure III of the eighth progress report (see para. 30 above), given the magnitude of the project, the Advisory Committee is of the view that the available information on the total project costs and benefits is insufficient to allow the General Assembly to make a fully informed decision on the proposed resource requirements of the project, or to provide the Assembly with adequate assurances that project costs can be brought under control over the remaining implementation period.

55. **In view of the foregoing, the Advisory Committee recommends that the General Assembly request the Secretary-General to conduct an analysis of the total costs and benefits of the project, including the indirect costs borne by the implementing entities (see paras. 43-44 above), and to update the business case, taking into account the comments and recommendations above. The Secretary-General should also be requested to submit the updated business case and outcome of the cost-benefit analysis for consideration by the General Assembly at the second part of its resumed seventy-first session.**

56. **Pending the Assembly's consideration of that analysis, and taking into account the information provided to it on the availability of resources as at 1 November 2016 (see para. 52 above), the Advisory Committee recommends that, at this stage, the General Assembly approve 50 per cent of the proposed net additional revised requirements for 2016-2017 of $26,811,400, in the amount of $13,405,700, to provide for the funding of the project until a further decision is made by the General Assembly at the second part of its resumed seventy-first session regarding the funding of the project until the end of 2017.**

IV. Conclusions and recommendations

57. The actions requested of the General Assembly are set out in paragraph 187 of the eighth progress report of the Secretary-General. **Subject to its comments and recommendations in the paragraphs above, the Advisory Committee recommends that the General Assembly:**

(a) Take note of the progress made on the implementation of Umoja since the issuance of the seventh progress report;

(b) Approve 50 per cent of the proposed net additional revised requirements for 2016-2017 of $26,811,400, in the amount of $13,405,700, to provide for the requirements of the project pending a further decision by the General Assembly at the second part of its resumed seventy-first session regarding the funding of the project until the end of 2017;

Programme budget

(c) Appropriate an amount of $2,010,900 under section 29A, Office of the Under-Secretary-General for Management, of the programme budget for the biennium 2016-2017, representing the regular budget share for the additional Umoja project costs, which would represent a charge against the contingency fund for the biennium 2016-2017;

Support account for peacekeeping operations

(d) Note that resource requirements in the amount of $8,311,500 will be included in the subsequent requirements for the support account for peacekeeping operations for the financial period from 1 July 2017 to 30 June 2018;

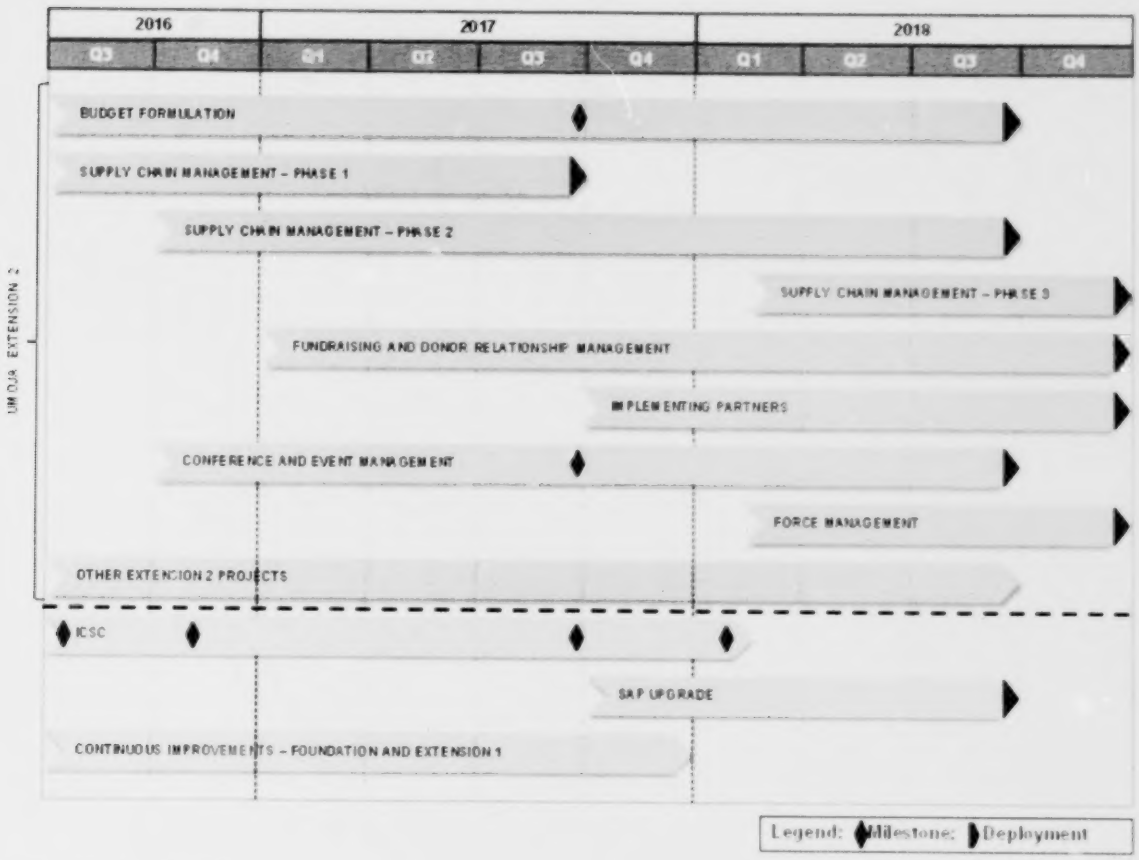
Extrabudgetary resources

(e) Note that requirements in the amount of $3,083,300 will be funded from extrabudgetary resources in the financial period from 1 January to 31 December 2017.

58. **The Advisory Committee will revert to the proposed resources for 2018-2019 in the context of its consideration of the Secretary-General's next progress report.**

Annex

Umoja schedule and workplan, 2016-2018



Source: A/71/390, figure III